ANNIE2-electronics-design - Bug #17916

readACDC after setConfig is all 0

10/16/2017 12:35 PM - Miles Lucas

Status:	New		**Start date:**	10/16/2017
Priority:	Normal		**Due date:**	
Assignee:			**% Done:**	0%
Category:			**Estimated time:**	0.00 hour
Target version:			**Spent time:**	0.00 hour
Description				
After calling ./bin/setConfig -trig config/trig-laserstand.config ./bin/readACDC reads out 0				

History

#1 - 10/16/2017 02:16 PM - Miles Lucas

Note that when we call ./bin/setConfig -trig config/trigoff.config readACDC works fine. It appears that some of the settings in our config/trig-laserstand.config are causing issues. I think it is related to the hardware trigger settings.

Edit:
Setting hardware_trig to 1 seems to be the culprit

#2 - 10/31/2017 10:09 AM - Miles Lucas

Bug in acdc-daq/src/setConfig
*Line 196:
unsigned int ext_trig_mode = 0x0 | 1 << 3 | 1 << 4 | hrdw_trigsrc << 13;

- Hrdw_trigsrc is bitshifted left 13 bits, and has 3 bits of data, so the usable data is in bits 15-13
- This is sent using the usb_read_mode command, with marker 0xc
- In the firmware, these values get parsed line 796 of ACC-2xSPF/src/usbWrapperACC
  SET_TRIG_SOURCE (2 downto 0) <= USB_INSTRUCTION(14 downto 12);
- The bits used are 14-12
- This is a discrepency - change the bit shift in the source code to bitshift 12
  unsigned int ext_trig_mode = 0x0 | 1 << 3 | 1 << 4 | hrdw_trigsrc << 12;
- Issues has already been committed to master. Have not yet checked for changes in hardware behavior